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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/593,513	09/18/2006	Takayuki Kondo	P/1878-199	1687

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EXAMINER

WANG-HURST, KATHY W

ART UNIT	PAPER NUMBER
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4173

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/593,513	Applicant(s) KONDO, TAKAYUKI	
	Examiner KATHY WANG-HURST	Art Unit 4173	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 9/18/2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>9/18/2006 and 3/6/2007</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: the meaning of the term "diversity hand-over state" is unclear to the examiner.

Appropriate correction is required.

Claim Objections

2. Claim 5 is objected to because of the following informalities: Claim 5 claims "the radio base station apparatus according to claim 5". Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. Claims 1, 8 and 10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. From specification of the application, examiner cannot establish the exact meaning of the term "a diversity hand-over state" used in the claims.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-3, 6, and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by **Padgett et al. (US 2002/0183039)**, herein referred as Padgett.

Regarding claim 1, Padgett discloses in a radio communications system having a diversity hand-over function, a radio base station apparatus for transmitting/receiving a signal to/from a mobile station over the air, said radio base station apparatus comprising:

a shared resource unit having processing device, as shared resources, for processing a signal of each call (**[0040] resource allocation module**); and
a buffer unit for sending a received signal to said processing device of said shared resource unit when the received signal is a signal of a call which is in a diversity hand-over state, such that the received signal can be transmitted at a predetermined timing, and for holding the received signal in a data buffer, when the received signal is not a signal of a call which is in a diversity hand-over state, and for subsequently sending the received signal to said processing device at a timing at which said processing device becomes available (**[0037]queuing therefore buffering; [0040] line 6, fixed time therefore predetermined time; and [0043] queue management module sending data for processing at resource allocation module. Resource is allocated to certain data, such as speech, due to priority, while other data, less time sensitive data, will be subject to queuing therefore buffering mechanism**).

Regarding claim 2, Padgett discloses the radio base station apparatus according to claim 1, wherein said signal transmitted/received to/from said mobile station is packet

data for a packet communication which allows a delay in the radio communications system **([0040] line 12, packet)**.

Regarding claim 3, Padgett discloses the radio base station apparatus according to claim 1, wherein said received signal is a downlink signal received from a base station controller **([0018])**.

Regarding claim 6, Padgett discloses the radio base station apparatus according to claim 1, wherein said received signal is an uplink signal received from said mobile station **([0018] uplink)**.

Regarding claim 9, Padgett discloses the radio base station apparatus according to claim 1, wherein
said shared resource unit and buffer unit are provided for a downlink signal to be transmitted to said mobile station over the air, and are provided for an uplink signal received from said mobile station over the air, respectively **([0018] downlink and uplink)**.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 4, 5, 7, 8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Padgett in view of **Rosner et al (US 2007/0047538)**, herein after referred as Rosner.

Regarding claim 4, Padgett discloses the radio base station apparatus according to claim 3, wherein said processing device of said shared resource unit **([0018] [0040])**, but fails to disclose the processing device is an encoder for encoding the downlink signal to be transmitted to said mobile station over the air in accordance with a predetermined coding scheme. Rosner teaches an encoder encoding data performed by a microprocessor at RF front end before the data is transmitted, with the encoding scheme predetermined through the information in the data frame header **([0023] and fig. 8 item 38)**. Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to incorporate the encoder taught by Rosner into the base station apparatus disclosed by Padgett in order to improve the synchronization and coding problems encountered with wireless network **([0023])** through controlling the coding scheme and coding rate.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Padgett.

Regarding claim 5, Padgett discloses the radio base station apparatus according to claim 1, wherein there is a said predetermined timing **([0040])** but fails to explicitly disclose the predetermined timing is specified by a frame number from said base station controller. Rosner teaches a wireless computer system where the timing of the data

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transmission is specified by the frame header and the timing can be changed by modifying the frame header **[0038]**. Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to incorporate the data transmission timing specified by the frame header taught by Rosner into the radio base station apparatus disclosed by Padgett in order to better control the data traffic timing through a timing information specified by a frame header in each data frame **[0038]**.

Regarding claim 7, Padgett discloses the radio base station apparatus according to claim 6, wherein there is said processing device **([0018] [0040])** but fails to disclose said processing device of said shared resource unit is a decoder for decoding the uplink signal received from said mobile station over the air in accordance with a predetermined coding scheme. Rosner teaches a decoder decoding data performed by a microprocessor at RF front end after the data is received, with the coding scheme predetermined through the information in the data frame header **([0063] and fig. 8 item 38)**. Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to incorporate the decoder taught by Rosner into the base station apparatus disclosed by Padgett in order to improve the synchronization and coding problems encountered with wireless network **([0023])** through controlling the coding scheme and coding rate.

Regarding claim 8, Padgett discloses the radio base station apparatus according to claim 7, wherein

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said predetermined timing is determined such that a signal decoded by said decoder from the uplink signal received from said mobile station is received by said base station controller at the same timing as the same signal that is received from said same mobile station and that is decoded by other radio base stations through diversity hand-over **[0028])**.

Regarding claim 10, Padgett discloses the radio base station apparatus according to claim 9, wherein:

said shared resource unit **([0040])** for the downlink signal, said buffer unit **([0037])** for the downlink signal sends the received signal to said shared resource unit for the downlink signal, when the received signal from said base station controller is a signal of a call which is in a diversity hand-over state, such that the received signal can be transmitted to said mobile station at a timing specified by a frame number from said base station controller, and said buffer unit temporarily holds the received signal in the data buffer when the received signal is not a signal of a call in a diversity hand-over state **([0043])**,

said shared resource unit **([0040])** for the uplink signal, and said buffer unit **([0037])** for the uplink signal sends the signal received from said mobile station of said shared resource unit for the uplink signal **([0043])**.

Padgett fails to disclose the encoder and decoder at said shared resource unit. Rosner teaches an encoder encoding data before the data is transmitted and a decoder decoding data after the data is received performed by a microprocessor at RF front end,

with the coding scheme predetermined through the information in the data frame header **([0023], [0063] and fig. 8 item 38)**. Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to incorporate the encoder and decoder taught by Rosner into the base station apparatus disclosed by Padgett in order to improve the synchronization and coding problems encountered with wireless network **([0023])** through controlling the coding scheme and coding rate.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Rosner et al (US 2007/0047538) discloses a wireless computer system with queue and scheduler .

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to KATHY WANG-HURST whose telephone number is (571)270-5371. The examiner can normally be reached on Monday-Thursday, 7:30am-5pm, alternate Fridays, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Benny Tieu can be reached on (571)272-7490. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/KATHY WANG-HURST/
Examiner, Art Unit 4173

/Lewis G. West/

Primary Examiner, Art Unit 2618